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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

COUNTRY Poland

SUBJECT Starachowice Metallurgical Works

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1. The Starachowice Metallurgical Works, Kielce Województwo, Ilza Powiat, is located on the Warsaw, Radom, Skarzyske Kamienna, Ostrowiec, Rozwadow, Lvov railroad line. The plant is 17 kilometers from Skarzyske in the direction of Ostrowiec. The terrain is wooded and very hilly. The nearest connection to Skarzyske (17 - 18 kilometers) is the Warsaw - Krakow state highway No 12. Up to 1939, 14,000 - 16,000 employees worked in this plant in three shifts. During the occupation the working force was maintained at about the same level. The number of personnel currently employed is unknown. Since there was a lack of housing, the expansion of the plant was predicated on the development of worker's settlements.

2. Water supply is a major problem. The Kamienna River, which flows at the average rate of 3,600 cubic meters per day, is the only source of water. A dam was built to create a reservoir raising the water level 2½ meters with the average depth being about 1 - 1.5 meters, covering about 140 hectares. This reservoir provides a rather small supply of water during a drought. Tests to find artesian wells came to nothing even though the drillers went to a depth of 500 meters.

3. The works has an electric power plant with a capacity of 8,000 kilowatts. High voltage power transmission lines of 15,000 volts carry current from Moscice and the ZEORK (Związek Elektrowni Okręgu Radomskiego - Kieleckiego, Union of Electric Power Plants of the Radom-Kielce Region).

4. Insofar as fuel supply is concerned, the plants are connected by pipeline with natural gas fields in Jaslo. The pipeline diameter is 30 centimeters and the transportation pressure is about 20 - 25 atmospheres. The pressure at the distributor station is reduced to about 6 atmospheres. Coke comes from Slask via railroads.

5. The machine shops and the ammunition finishing plant were modern. The plant was in the midst of alterations and expansion. The German occupation inhibited its development. The present condition of the plant is unknown.

6. Production up to 1939 included Bofors 40 mm antiaircraft guns; 105 - 155 mm field guns; all kinds of ammunition, such as artillery, antiaircraft, and aerial bombs up to 100 kilograms; armored cupolas for fortifications and tanks; caterpillar treads; automobile frames; heaters; and boilers for central heating. During the German occupation the main product was artillery ammunition and the roughing work on artillery gun barrels. Besides this, thin walled castings for use as collars

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for submarine Diesel engines were made, and machine tools were repaired. At present, tractors and trailers are being produced officially. The specific nature of the production is unknown. The personnel is exceptionally well trained; it is quite possible that production could be purely military in nature.

7. Just before World War II, in 1939, the plants had a Centralne Biuro Konstrukcyjne (Central Engineering Design Bureau) which employed about 200 engineers and model builders to design new types of cannon and ammunition. The plants built all the cannon prototypes and also planned and prepared the production for other armament factories. Most of the engineers deserted during the German occupation. I met many of them in the Slask area in 1945.

8. Plant administration was excellent. The plant was organized as an integrated, independent unit in which raw material in the form of ore was processed at the plant into a high-quality, finished product.

9. The plant complex was divided into the following basic units:

(a) Iron ore mines

(b) Limestone quarries

(c) Metallurgical works including: blast furnace, electric power plant, two open-hearth furnaces, three electric steel furnaces, steel foundry, iron foundry, rolling mill, the forgery, hardening works, brick yard, colophony plant, structural steel division, and the repair division.

(d) Machining plants, with two artillery divisions, projectile plant, case manufacturing plant, automobils frame stamping mill, and a carpenter shop.

(e) Finishing plant for artillery and antiaircraft ammunition, and aerial bombs.

(f) Forest management and saw mills

(g) "Vidia" hard metals section

(h) Engineering design bureau

10. In the iron ore mines, the ore (limonite with up to 35 per cent iron) is mined by the open-pit method. After roasting, this ore can be used as an admixture constituting about 30 per cent of the charge. It is also used as an oxidizing agent in electric and open-hearth furnace steel production. Tests to run the blast furnaces on meadow ore alone did not give satisfactory results.

11. Limestone quarries, producing the flux for blast furnace steel production, use the open pit method in nearby woods.

12. The amount of ore and limestone extracted was large enough to fulfill the requirements of the plants.

13. Forestry management was very advanced and was applied over a 100 square kilometer tract of land which produced building lumber.

14. The large sawmill and veneer plant were geared to dressing lumber for the manufacture of railroad cars, carpentry, and ammunition packing cases.

15. Production capacity for the blast furnace was about 24 tons of pig iron per day. The ores used before World War II, in 1939 were: Swedish, Algerian, Krivoi Rog, and domestic limonite. The pig iron was allowed to cool because the plant site was crossed by the Warsaw, Sosnowiec, Ostrowiec, Lvov railroad. A project for transferring this railroad line to the outskirts of Starachowice, beyond the plant site, was about to be realized. In connection with this, a plan had been worked out for transporting hot pig iron to the open-hearth furnaces.

16. The local 8,000 kilowatt electric power plant serviced only the needs of the plants and factory communities. The steam boilers, Babcock water piping system, had two turbogenerators fired with coal, coal dust, blast furnace gas, and natural gas.

17. Near the blast furnace, a brick yard converted blast furnace slag into building brick; a colophony works produced turpentine and colophony from waste forest products. Until last year, ovens converted black coal into metallurgical (long - flaming) coke and activated carbon for gas mask use. The blast furnace buildings are of masonry. The electric power plant is 40 x 30 meters and about 20 meters high. In 1939 this plant was lengthened by a 20 meter steel frame structure with slag brick walls to house two boilers. The tapping area is 20 x 30 meters and 1,500 meters high, with burnt brick walls and a light-weight roof of structural steel.

18. The open-hearth furnaces, of 26-ton capacity per heat, produce three to four heats per day. They are fired with producer gas; but in the future they will be fired with natural gas. Production is based on pig iron produced at the plant and scrap metal. The production program ranged from plain carbon steel to special alloy steels such as chrome-nickel-phosphorus (projectiles). The building, about 30 x 40 x 15 meters, is made of burnt brick.

19. Most of the special and tool steel production was done in the following electric furnaces: one furnace of seven tons capacity and two furnaces of five tons capacity each. The electric steel furnaces produced steel castings, armored cupolas for fortifications, and tanks and links for tank caterpillar treads. Production output is difficult to assay. In the electric steel furnace works there were many small furnaces (400 kilograms) for smelting bronzes and ferrous and nonferrous metals. The building, 28 x 70 x 20 meters, is of structural steel frame with slag brick walls.

20. The iron foundries were well equipped. They had two cupolas for melting pig iron. They specialized in thin walled castings for parts of heaters and furnaces for central heating. The molding works made casting molds for the plant's own use.

21. The division of materials for molds and fire brick supplied all the needs of the plants. The building was made of burnt brick.

22. The forgery was equipped with a 2000 ton stamping press for the production of heavy forgings such as barrels for cannon and rollers for rolling mills. The building, 25 x 25 x 16 meters, was of structural steelframe with slag brick walls.

23. The hardening works was equipped to temper heavy goods and had equipment for heat treatment of artillery barrels up to 12 meters long. The building, 22 x 20 x 44 meters, is structural steel frame construction with slag brick walls.

24. The foundry repair shop was equipped with heavy machine tools to keep production rolling and for tool repairs. As time went on, however, artillery roughing work was undertaken. The building, 20 x 40 x 15 meters, is structural steel frame with slag brick walls.

25. The structural steel division produced steel frames for factory shops and had splendid electric welding equipment. It produced structural steel for almost all the defense industries. It also produced high tension towers.

26. The rolling mill produced all kinds of section steels up to No 14 (channels and beams - maximum height of 14 centimeters) as well as rails for narrow gauge railroads. The building, 40 x 50 x 12 meters, was made of burnt brick. There was a compressed air station near the plant which supplied compressed air for all the metallurgical and machining plants. (working air pressure -six atmospheres - six kilograms per square centimeter)

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ENCLOSURE (A): Sketch Map [redacted] Starachowice Metallurgical Works, With Legend 25X1

OSURE (A)
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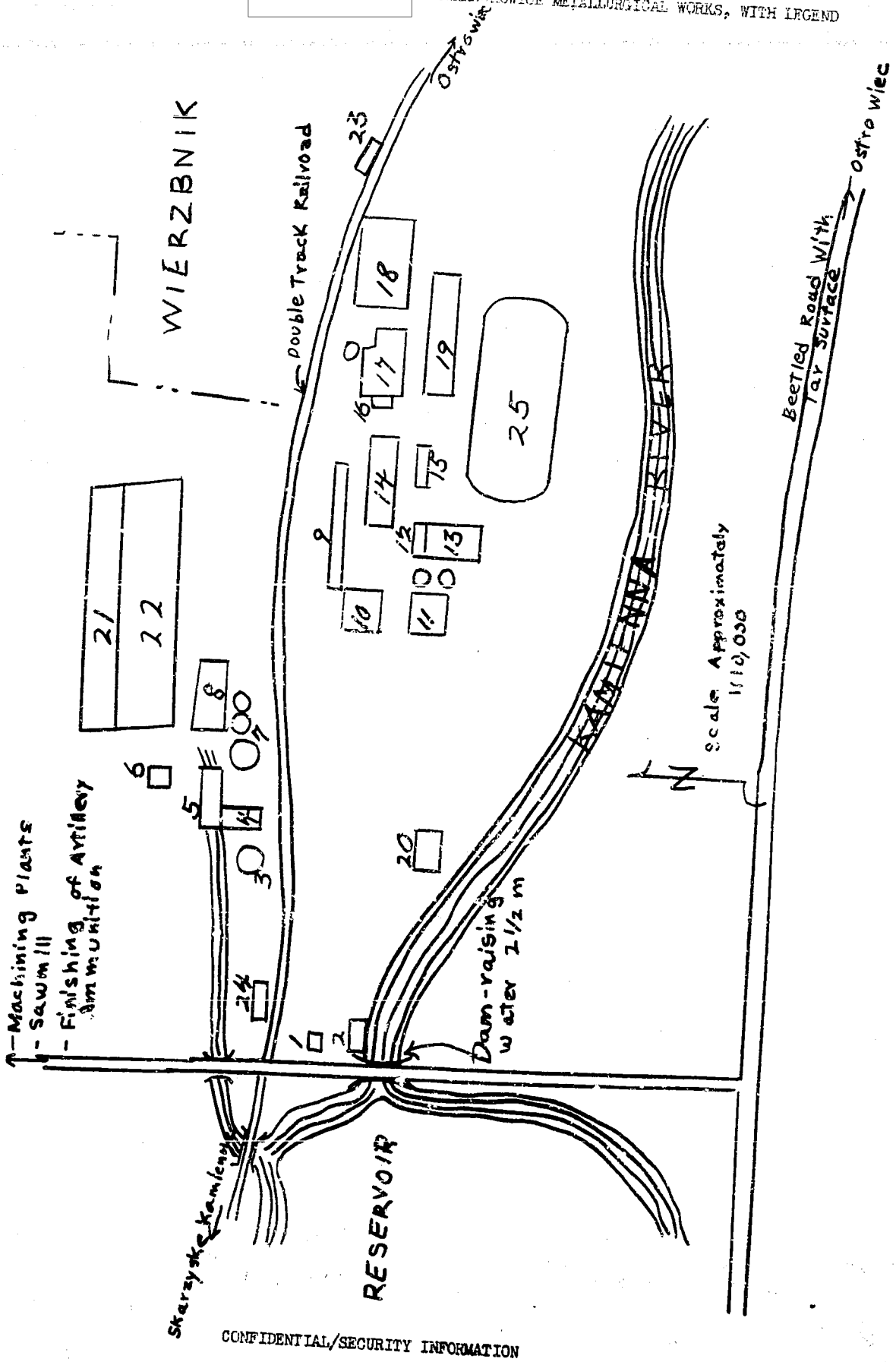
SKETCH MAP

SWIATOCHOWICE METALLURGICAL WORKS, WITH LEGEND



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Legend:

1... Natural gas distributor station
2... High speed drinking water filters
3... Cooling tower
4... Electric power plant and central for the high voltage power transmission lines
5... Brick yard and compressed air station
6... Colophony works
7... Blast furnace
8... Tapping area
9... Warehouses for alloy admixtures
10... Forge
11... Hardening works
12... Compressed air station
13... Repair division
14... Electric steel furnaces
15... Division of materials for molding
16... Administration building
17... Open-hearth furnaces
18... Rolling mill
19... Foundry and molding
20... Sewage purification station
21... Warehouses
22... Ores and coal
23... Wierzbnik Railroad Station
24... Starachowice Station
25... Scrap metal warehouses